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Colleges and universities are the hubs for the new microeconomics of regional growth

THE UNITED STATES is currently undergoing a dramatic economic transformation, more dramatic even than the previous transformation from a farm-based economy to an industrial economy. This has been variously described as a transformation to an "information economy," an "internet economy," a "technology

economy," a "hightech economy," a

"knowledge economy," or even a "post-industrial society." Those are all wonderful terms, but I prefer the term "creative economy" because, intuitively or emotionally, I find it more inclusive. Every single human being is creative. The great challenge of our age is to tap and harness all of that creativity.

We are shifting from an economy based on physical inputs—land, capital, and labor—to an economy based on intellectual inputs, or human creativity. Although economic transformations are always difficult and require great sacrifice, this shift is cause for tremendous optimism. If we can emerge from the current transformation in the right way, then for the first time in human history our economic future will depend upon the further development of human beings. We will not grow our

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economy, we will not become more prosperous, unless we further develop all of our human creative capabilities.

Two economies

At the turn of the last century, most Americans worked on farms. Less than 5 percent worked in what I have come to call the creative sector of the economy—science, technology, innovation, art, culture, music, design, entertainment, and the knowledgebased professions. By 1950, a growing number of Americans, approximately 50 percent, worked in manufacturing. Fewer worked on farms, and less than 10 percent worked in the creative sector of the economy. The real explosion occurred between 1980 and 2005. In that twenty-five-year period alone, twenty million new jobs were added in the creative sector of the economy. Now, over the course of the next decade—according to data from the Bureau of Labor Statistics—ten million new jobs will be added in the creative sector of the economy.

But our conception of the creative economy must be expanded beyond science, technology, and design to include all applications of creativity. The United States will lose half a million manufacturing jobs, but it will add another five million jobs in the service economy. The economic futures of those of us who are fortunate enough to participate in the creative sector, compared to those of us who toil in the service economy, are bifurcating. We are creating two separate economies.

Seven-hundred-fifty-thousand new retail sales jobs will be created. Many of the companies now operating in the retail sector are taking

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a strategy very different from Wal-Mart's. Companies like Best Buy, Whole Foods, Wegmans, IKEA, and the Container Store are paying better and providing better benefits. They are recognized by Fortune magazine as being among the best places to work, along with all sorts of high-technology

companies. But most importantly, they are harnessing the creativity of their workforce. The real challenge of our time is not to use design and innovation to create new products, but to upgrade creative work across the board—not just in the creative economy, where 30 percent of us now work, but in the service sector as well.

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All of us are creative, and we are moving into a creative economy. There are a lot of hurdles, but there is great potential.

Globalization

New York Times columnist Thomas Friedman (2005) has argued recently that the world

is flat. Friedman has come to believe that the single biggest threat of our time is the leveling of the playing field around the world. He argues that bringing in three billion new capitalists from India and China has made the world more homogenous, has created more competition, and threatens American jobs and livelihood. He cautions his own daughters



Richard Florida. **Annual Meeting**

to study hard and do well because, somewhere in India or China, there is a student who is studying hard and who will compete with them directly for a job. In order to innovate in this flat new world, he says, one no longer has to emigrate.

Working with Tim Gulden of the University of Maryland, I decided to take a look at the data. We plotted where people in the world live, where light emission maps show significant energy use, where economic activity takes place, and we did some fancy analytics with patenting data to show where innovation occurs. We also looked at rates of scientific and technological publishing in universities. We found that Friedman has got half of the story absolutely right. Advances in technology and communications, as well as trade and transport, certainly have made the world flatter in a sense. Many more places are now open for business. But really, the world is not flat at all. In fact, from population to production to innovation to science, the world is increasingly mountainous or spiky. We wrote a piece for the Atlantic Monthly called "The World Is Spiky" (2005), in fact.

Here's what we saw. The world is built around a dozen or two mega-regions. Sure, if you look at it from New York to Washington, DC, to Bangalore to Shanghai to Zurich to Paris to London, then everything from the top of the peak looks completely flat. But in order to make it in the world today, you had better scramble to get yourself onto one of those peaks, because the distance between the peaks and the valleys is growing wider every day. The motor force that is driving the world economy is not a tendency toward decentralization. Rather, it is a simultaneous decentralizing and centralizing tendency. It is not a one-way street, it is a dialectic. The world is becoming flatter and spikier at the same time.

The reason people concentrate is very simple. It does not have to do with jobs and economic opportunity. It does not really have to do with amenities and lifestyle. When people concentrate in one place, they gain enormous economic leverage or productivity advantage. When they cluster together—people, not just companies—they make each other more productive, they make each other more inventive, and they complement each other's skills and talents. And all of this leads to robust economic growth.

The role of colleges and universities

Colleges and universities are the hubs for this new microeconomics of regional growth. The conventional view among economists is that the university is an engine of innovation: research leads to new ideas, which lead to new inventions, which lead either to an increase in the productivity of existing companies or, better yet, to the creation of spin-off companies. But, as discussed in a new report called "The University in the Creative Economy"—which my colleagues Gary Gates, Kevin Stolarick, and Brian Knudsen wrote with me—the university is far more important to the creative economy than that simple-minded view allows. That conventional view oversells the role of the university because it oversells what we do least well.

My theory of economic growth is simple. I call it the "three Ts": technology, talent, and tolerance. All growing, exciting, talent-magnet regions do all three things well. They invest in, exploit, and utilize technology. They also attract, utilize, and retain talent. But talent does not just happen to come to a particular region. It is not just born in the region, and it does not necessarily stay there. People are

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highly mobile. Talent is not a stock, it is flow. The most important thing is either to attract talented and creative people or to "grow" them, and that takes what I call tolerance. It takes an open system. To create a growth region, you need the kind of place that people want to come to and can easily get to, where they can lead the lives they want and express themselves freely.

What, then, is the role of colleges and universities in the creative age? The university plays a big role in technology, of course. Particularly in large metropolitan areas, research in technology adds to regional earnings and employment. Yet while technology is important, the more critical way colleges and

universities affect the regions in which they're situated is through the other two "Ts." Colleges and universities are talent machines; their most basic functions are to create talent, to connect people to one another, and to add to their pool of talent.

Colleges and universities not only do this directly, they also do it indirectly. If a college or a university has a great faculty, then it attracts great graduate students; if it has great graduate students and faculty, then it also attracts great undergraduates. But more importantly, if a town has a great college or university, or if it has several of them, it attracts people and, often, companies. Boston and Austin are two perfect examples of that—places



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where companies have located in large part because universities have produced large pools of talent for them to tap. And a college or university adds to the ambience of a region and allows it to attract people.

If you take the number of people in a particular college or university in any region in the United States and compare it to the number of people in that same region who have a college degree, as my colleague Kevin Stolarick at Carnegie Mellon has done, you can create a "brain gain" index. Of the more than three hundred metropolitan regions in the country,



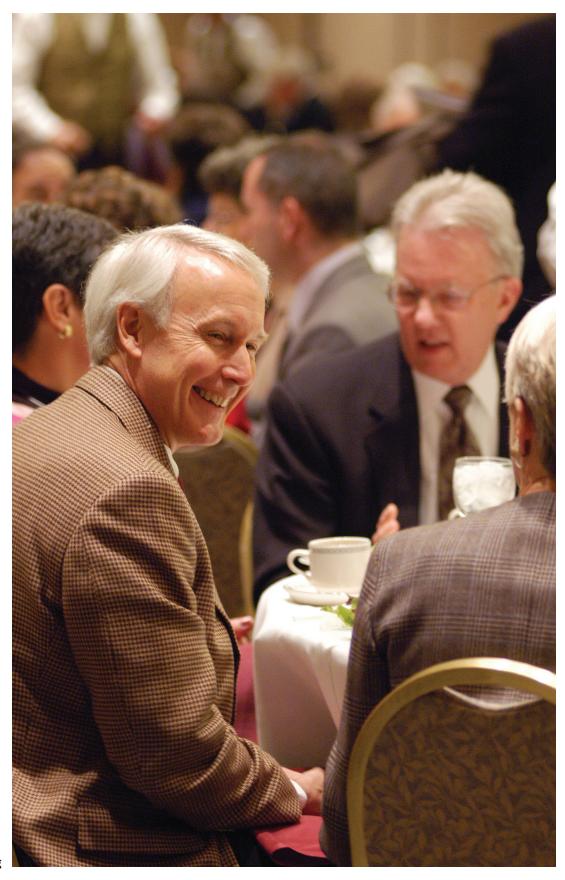
only 10 percent have a positive score on Stolarick's index. In other words, 90 percent of all metropolitan regions in the United States are net exporters of talent—they lose their creative young people.

That is precisely the kind of migration we are experiencing in this country. It is not enough simply to have a strong college or university. It is the relationship between the colleges and universities and the regions that creates maximal impact.

Tolerance, the third "T," is the key variable. The regions that are most open to different lifestyles and to people who think differently or who express their creativity differently have the kind of ecosystem that attracts talented and entrepreneurial people across the board. Colleges and universities have an enormous effect on tolerance because they help to create environments that are open to different lifestyles. They have become the new Ellis Islands of our country, attracting talented and skilled immigrants. Immigrants are powerful spurs to growth, and colleges and universities are focal points for attracting those immigrants to a particular region. Moreover, they are the kinds of places where talented people of all stripes interact. A stimulating intellectual environment creates the capacity to innovate and, in turn, to create regional success.

Colleges and universities have to contribute to the regional absorptive capacity of a creative ecosystem. They need not only to generate innovations but also to absorb them. In other words, although a college or university may be sending out the right signals—and the signal may be strong—the receiver in the region may be switched off. Getting that match between signal and receiver, between the college or university and the community, and creating a seamless web of connections between them is very important.

By comparing measures of creativity to measures of the universities and colleges present in a region, you get what I've called a "creativity index." The large metropolitan regions are obvious: Silicon Valley and the Bay Area, San Diego, Austin, Boston, Seattle, Chicago, Denver, and Los Angeles. The midside regions are interesting: Lansing, Madison, Albany, New York, and Ann Arbor. And the



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small regions are very interesting: Gainesville, Bryan (Texas), Bloomington, Corvallis, Iowa City, Lafayette, and Charlottesville. The creativity index suggests that although there are many places where the signal is not being received, there are many places of various sizes where it is.

Another thing the index suggests is that certain big regions remain unaware of this. When people ask me about the future of Detroit, for example, I respond by telling them that the future of Detroit has little to do with rebuilding the renaissance center. The future of Detroit instead depends upon building a strong and fundamental connection to Ann Arbor. When people ask me about the future of Indianapolis, I point out that there are two fabulous college towns filled with students within a half-hour's drive. Indianapolis needs to build an integrated super-region. The point is there's considerable leverage in smaller and medium regions as well as in the big ones.

Life satisfaction

I'm involved with the Gallup Organization in an ongoing study of subjective well-being, human happiness, and life satisfaction. I've worked with David Wilson and Darby Miller-Steiger and a cracker-jack team of Gallup's polling people to survey three thousand people so far, and our group will survey tens of thousands of people before the study is completed. This is the first time that the role of place and community in people's lives has been examined, and the preliminary findings are surprising.

We're finding that people's perceptions of colleges and universities have a significant effect on their satisfaction with their communities. When asked to describe their ideal city, people tend to identify quality of life issues, aesthetics, openness to diversity, and the presence of great colleges and universities. All of these characteristics are important factors in determining people's willingness to stay in their communities. The way people perceive colleges and universities has a lot to do with whether they want to stay in their city, and it has a great deal to do with whether or not they would recommend it to their friends or relatives. In this regard, people's views of colleges and universities are far more important than the more traditional "pocketbook" issues.

Colleges and universities tend to affect people's life satisfaction not necessarily through

their own direct educational experiences but through their perceptions of their cities. When we looked at this by level of education—people who did not go to college or university, people who went to college or university, and people who went to graduate school—we found that positive perceptions of colleges and universities actually decrease with the level of education. It's almost linear: people with no college or university education are the people who value it the most. This is a very interesting finding, and it may suggest a need to more actively build connections not only to community leadership but also to the



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community more broadly—not just our constituents, not just highly educated people like us, but all those people who view the colleges and universities in their towns as pathways to a better life.

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